AF/2155 ftw

TRANSMITTAL OF APPEAL BRIEF (Small Entity)

Docket No. CYB-07102/03

In Re Application Of: **Jacobus**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
09/785,385	02/16/2001	Lesniewski	25006	2155	2386

Invention: **DISTRIBUTED COMPUTING ENVIRONMENT**

COMMISSIONER FOR PATENTS:

Transmitted herewith in triplicate is the Appeal Brief in this application, with respect to the Notice of Appeal filed on:

☒ Applicant claims small entity status. See 37 CFR 1.27

The fee for filing this Appeal Brief is: **$250.00**

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Dated: **Oct. 10, 2005**

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I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on

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Sheryl L. Hammer

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cc:

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of: Jacobus

Serial No.: 09/785,385 Group No.: 2155

Filed: Feb. 16, 2001 Examiner: Lesniewski

For: DISTRIBUTED COMPUTING ENVIRONMENT

APPELLANT'S BRIEF UNDER 37 CFR §1.192

Mail Stop Appeal Brief
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

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Dear Sir:

I. Real Party in Interest

The real party and interest in this case is Cybernet Systems Corporation, by assignment.

II. Related Appeals and Interferences

There are no appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status of Claims

The present application was filed with 23 claims. Claims 1-23 are pending, rejected and under appeal. Claims 1 and 11 are the independent claims.

IV. Status of Amendments Filed Subsequent Final Rejection

No after-final amendment has been filed.

V. Summary of Claimed Subject Matter

Independent claim 1 is directed to a distributed network computing environment. The

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environment includes a plurality of clients communicating within a multicast cloud using content-specific messages to implement a groupware application. One or more network routing modules or router-embedded applets are operative to distribute the messages based upon the content in addition to normal packet-routing. (Specification, page 8, line 17 to page 10, line 2).

Independent claim 11 is directed to a distributed network computing environment comprising a network-enabled client application. At least one lobby manager facilitates communications between the client application and a "federation." One or more network routing modules or router-embedded applets implement application-specific message culling to reduce the communications with the federation. (Specification, page 8, line 17 to page 10, line 2).

VI. Grounds of Objection/Rejection To Be Reviewed On Appeal

A. The rejection of claims 1 and 3-6 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,138,144 to DeSimone et al.

B. The rejection of claims 7-9, 11 and 14-23 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,138,144 to DeSimone et al. (as applied to claims 1- and 3-6 above), in view of U.S. Patent No. 5,841,980 to Waters.

C. The rejection of claims 2, 10, 12 and 13 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,138,144 to DeSimone et al. (as applied to claims 1- and 3-6 above), in view of U.S. Patent No. 5,841,980 to Waters (as applied to claims 7-9, 11 and 14-23), further in view of U.S. Patent No. 6,015,348 to Lambright et al.

VII. Argument

A. Claims 1 and 3-6.

Claims 1 and 3-6 stand rejected under 35 USC §102(b) over U.S. Patent No. 6,138,144 to DeSimone. DeSimone resides in a method for managing multicast addresses for transmitting and receiving multimedia conferencing information on an internet protocol (IP) network implemented over an ATM network. The architecture allows client selection of which packets to receive based on the originator of the packets.

A multicast address resolution system (MARS) is used to identify receivers. The innovation

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appears to be a global MARS server that understands how to address each participant in a conference session.

Broadly, DeSimone is directed to optimizing normal multicast communications over non-IP (ATM) networks by consolidating into a global spot a MARS, Multicast Address Resolution System. This system knows each client network address to which traffic is to be sent – the innovation is to globalize this rather than put a MARS into each subnet.

Claim 1 has been amended to set forth that the instant invention includes one or more network routing modules (or router-embedded applets) operative to distribute messages based upon the *content thereof* (in addition to normal packet routing). This distinguishes over DeSimone is several significant ways:

DeSimone identifies destinations by address only – not by message content type (i.e. clients select which streams to accept) – according to the present invention, messages are routed based on logic in the FedHost – i.e. the router itself, not based on client logic or preference (although logic exists in the system to allow for this case);

(1) The routing fabric (i.e. Multicast) forwards all messages by destination address in DeSimone. In Appellant's system, some or all packets are actually NOT routed based on router logic which is keyed by packet content (interpreted by application-specific code or applets included in the router – code that in effect "understands" the meaning of the packet stream and uses that to affect routing/no routing decisions);

(2) There is no MRAL (Multicast Receive Address List) in our routers unless implemented in an application specific way by applet logic.

Thus, Appellant's system allows each client to send packets to all other clients in a network (i.e. to multicast), but dynamically allows the routing fabric to determine to which clients the traffic should go (for slowing or disconnecting particular clients), based on packet content itself. Each broadcaster would 'think' it was sending to all clients, and all clients would 'think' that they are getting everything, but the routing fabric would not route all data sent to all clients receiving based on logic that is internal to the router and is based on the requirements of the applications generating the traffic (i.e. this logic is inserted into the routers by the application developer).

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The advantage of Appellant's approach over DiSimone is that clients do not need to understand anything about the network optimization. However, to accomplish this the routers must be application specific – i.e. they must know about network optimization.

B. Claims 7-9, 11 and 14-23

Claims 7-9, 11 and 14-23 stand rejected under 35 USC §103(a) over DeSimone in view of Waters (5,841,980). It is believed that claims 7-9, which depend from claim 1, are allowing based upon the arguments above under 35 USC §102(b); that is, even if the DeSimone/Waters combination were legitimate, Appellant's invention would not result.

However, the DeSimone/Waters combination is without justification. Concerning claim 11, the Examiner argues that the DeSimone/Waters combination "makes sense" because it would result in "a more optimal interaction among its multiple users." However, this argument is too nebulous to constitute a sufficient grounds for rejection. The Examiner must provide a *reason* why one having ordinary skill in the pertinent art would have been led to combine the cited references to arrive at Appellant's claimed invention. There must be something *in the prior art* that suggests the proposed combination, other than the hindsight gained from knowledge that the inventor choose to combine these particular things in this particular way. Uniroyal Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988). The Examiner is also required to make specific findings on a suggestion to combine prior-art references. In Re Dembeczak, 175 F.3d 994, 1000-01, 50 USPQ2d 1614, 1617-19 (Fed. Cir. 1999).

Although the Examiner argues that Waters represents analogous art, this in not really the case. Whereas Waters is optimized for computer gaming, DeSimone is optimized for multicast multimedia (i.e. video conferencing). Indeed, Waters addresses large-scale, multiplayer gaming, and calls for dividing the game space (the virtual play board) into multiple zones, which can be served by a single server. This means that as the player moves about the playing field he is logically connect to the server for the specific zone in which his play is logically occurring. Such an architecture would be of no benefit to DeSimone which is directed to optimizing normal multicast communications over non-IP (ATM) networks. The point of novelty is knowing each client network address to which traffic is to be sent, rather than implement a multicast address resolution system each subnet.

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In Appellant's system there are no fixed zones, and the zones are not associated with a particular simulation or game server. Note the limitation in claim 11 of "one or more routing modules or router-embedded applets that implement *application-specific* message culling..." As discussed above, this is markedly different that the DeSimone system and the proposed addition of Waters does not cure this deficiency. In contrast to the cited references, Appellant's routing fabric has "culling rules" it uses to determine if two players need to interact – these rules are game and game developer specific. They exist identically in every server that routes traffic and applied identically regardless of to which server a game client connects. Logically, all clients exist in the same unzoned game space, but traffic between a pair of clients is controlled by their relative positions (which is represented as data in the packets that could be sent from one to another – i.e. based on game-specific packet content).

Waters describes the old way multiplayer games are implemented on a fixed, or zoned space, while Appellant's invention implements games and simulations without a fixed zoned space using dynamic rules which can be used to create either fixed or dynamic zones of inclusion (or exclusion).

C. Claims 2, 10, 12 and 13.

Claims 2, 10, 12 and 13 stand rejected under 35 USC §103(a) over DeSimone in view of Waters (5,841,980), and further in view of Lambright (6,015,348). Apart from the fact that there is no evidence *from the prior art* that suggests the proposed combination, Lambright, like DeSimone, uses fixed zones. In contrast, Appellant's does not use fixed zones at all. Lambright is a variation on the Waters idea of fixed zones that client connects to keep traffic to a particular processor below a fixed limit, but includes the idea that the zones (they call sectors managed by a sector manager) are dynamically created based on client traffic.

Conclusion

In conclusion, for the arguments of record and the reasons set forth above, all pending claims of the subject application continue to be in condition for allowance and Appellant seeks the Board's concurrence at this time.

Respectfully submitted,

By:_____

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APPENDIX A

CLAIMS ON APPEAL

1. A distributed network computing environment, comprising:

a plurality of clients communicating within a multicast cloud using content-specific messages to implement a groupware application; and

one or more network routing modules or router-embedded applets operative to distribute the messages based upon the content in addition to normal packet-routing.

2. The environment of claim 1, wherein the application is a distributed simulation or game.

3. The environment of claim 1, wherein the application is a client-selectable and controllable data service associated with the distribution of audio, video, or other digital signal streams.

4. The environment of claim 1, wherein the clients enter, leave, and interact with the cloud through a lobby manager.

5. The environment of claim 4, wherein the lobby manager is further operative to validate the application in terms of compatibility and download data to correct for deficiencies.

6. The environment of claim 4, wherein the lobby manager is further operative to simultaneously support multiple clouds through multicast or replicated unicast protocols.

7. The environment of claim 1, wherein the routing modules implement application-specific message culling to reduce client-cloud communications.

8. The environment of claim 7, wherein the message culling includes message omission, rerouting, and other quality-of-service modifications.

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9. The environment of claim 7, wherein the application communicates internal state changes into the cloud through an API.

10. The environment of claim 1, wherein the application is a massive groupware application involving thousands of world-wide participants.

11. A distributed network computing environment, comprising:

a network-enabled client application;

at least one lobby manager that facilitates communications between the client application and a federation; and

one or more network routing modules or router-embedded applets that implement application-specific message culling to reduce the communications with the federation.

12. The environment of claim 11, wherein the application is a distributed simulation.

13. The environment of claim 11, wherein the application is a game.

14. The environment of claim 11, wherein the application is a client selectable and controllable data service.

15. The environment of claim 14, wherein the data service includes audio, video, or other type of digital signal feed.

16. The environment of claim 11, wherein the routing modules further support a point-to-multipoint distributed communications model between clients.

17. The environment of claim 11, wherein:

at least some of the client applications run on host platforms; and

the routing modules further support conventional internet packet routing among the hosts.

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18. The environment of claim 11, wherein the routing modules further support one or more conventional multicast protocols.

19. The environment of claim 11, wherein the application communicates internal state changes into the federation through an API.

20. The environment of claim 11, wherein the message culling includes message omission, rerouting, and other quality-of-service modifications.

21. The environment of claim 11, wherein the lobby manager is further operative to validate the client application compatibility with the federation and download data to correct for deficiencies.

22. The environment of claim II, wherein the lobby manager is further operative to simultaneous process multiple federations.

23. The environment of claim 22, wherein the federations communicate through multicast or replicated unicast protocols.

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APPENDIX B

EVIDENCE

None.

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APPENDIX C

RELATED PROCEEDINGS

None.

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